

Report : Assessment Cycle Details for : Building Technology Specialist

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Workspace : Program Assessment Plans

Assessment Plan: 2018-2020 Assessment Cycle: Assessment Plan and Assessment Findings

Assessment Plan Template: Academic Program Assessment Plan Template

Report Generated : Friday, September 04, 2020

## Measures and Findings

### *Building Technology Specialist Outcome Set (2018-2020)*

#### Outcome

##### **SLO 1**

*Demonstrate a working knowledge of construction mathematics.*

##### **Measure**

*Measure 1 (SLO 1)*

**DIRECT - EXAM**

**Course Alignment:**

BLDG 1120

**Acceptable Target:**

At least 80% of Building Technology Students will identify and demonstrate the ability to use rulers and measuring tapes in both the Imperial and metric systems.

**Measure Description:**

Written Exam and Rubric - Mathematics assessment

##### **Findings**

*for Measure 1 (SLO 1)*

**Summary of Findings:**

87.1% of students successfully completed objective.  
(31 total students: 27 passed, 4 failed)

**Target Achievement:**

Met

**Analysis of Results:**

Faculty noticed that several students had background knowledge with using rulers, which helped with a high success rate. Some students need more practice with reading a ruler between metric and imperial systems. An electronic ruler reading program could help students become more even more familiar with distinguishing between ruler types.

##### **Measure**

## *Measure 2 (SLO 1)*

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### **DIRECT - EXAM**

#### **Course Alignment:**

BLDG 1120

#### **Acceptable Target:**

At least 70% of Building Technology Students will identify basic angles and geometric shapes and demonstrate the ability to calculate area and volume of two and three dimensional shapes.

#### **Measure Description:**

Written Exam and Rubric - Mathematics assessment

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### ***Findings***

#### *for Measure 2 (SLO 1)*

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#### **Summary of Findings:**

80.6% of students successfully completed objective.  
(31 total students: 25 passed, 6 failed)

#### **Target Achievement:**

Met

#### **Analysis of Results:**

Faculty provide multiple opportunities to explore this concept through exercises that helps to reinforce understanding. Students may get confused between area and volume calculations in regards to 2D and 3D. Volume calculations need to be like-measurements and some students have a hard time switching across measurement types. Faculty will seek opportunities for additional practice for those students who struggle with this concept.

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## **SLO 2**

*Demonstrate a knowledge of the basic concepts and applications of carpentry.*

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## ***Measure***

### *Measure 1 (SLO 2)*

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### **DIRECT - EXAM**

#### **Course Alignment:**

BLDG 1210

#### **Acceptable Target:**

At least 74% of Building Technology students will display the ability to identify the components of and demonstrate the ability to estimate materials for and layout and install the parts of a floor system.

#### **Measure Description:**

Written Exam and Rubric - Carpentry assessment

## ***Findings*** *for Measure 1 (SLO 2)*

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### **Summary of Findings:**

71.0% of students successfully completed objective.  
(31 total students: 22 passed, 9 failed)

### **Target Achievement:**

Not Met

### **Analysis of Results:**

Faculty noticed that students who performed well on this assignment typically entered into the program with higher math skills. Students were able to identify but sometimes struggled with necessary calculations. Faculty will explore ways to identify students who are struggling with calculations and provide additional time on task to help reinforce.

## ***Measure*** *Measure 2 (SLO 2)*

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### **DIRECT - EXAM**

### **Course Alignment:**

BLDG 1210

### **Acceptable Target:**

At least 75% of Building Technology students will display the ability identify the components of and demonstrate the ability to estimate materials for and layout and install the parts of a wall system.

### **Measure Description:**

Written Exam and Rubric - Identification of wall components

## ***Findings*** *for Measure 2 (SLO 2)*

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### **Summary of Findings:**

77.4% of students successfully completed objective.  
(31 total students: 24 passed, 7 failed)

### **Target Achievement:**

Met

### **Analysis of Results:**

As with floor system activity, identification wasn't an issue for many students, but others struggled with making correct calculations. Those students who came into the course with strong math skills were better able to make appropriate calculations.

### **SLO 3**

*Demonstrate a knowledge of electricity and electrical wiring and components found in residential and commercial buildings.*

### ***Measure***

#### *Measure 1 (SLO 3)*

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#### **DIRECT - EXAM**

#### **Course Alignment:**

BLDG 1310

#### **Acceptable Target:**

At least 76% of Building Technology students will demonstrate the ability to explain the grounding requirements of a residential electric service.

#### **Measure Description:**

Written Exam and Rubric - Residential electric service

### ***Findings***

#### *for Measure 1 (SLO 3)*

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#### **Summary of Findings:**

78.9% of students successfully completed objective.  
(38 total students: 30 passed, 8 failed)

#### **Target Achievement:**

Met

#### **Analysis of Results:**

Students had to learn and apply a formula based on building load. Faculty noticed that most students picked up on this quickly but those without solid math skills had a little more trouble with the calculation.

### ***Measure***

#### *Measure 2 (SLO 3)*

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#### **DIRECT - EXAM**

#### **Course Alignment:**

BLDG 1310

#### **Acceptable Target:**

At least 72% of Building Technology students will display the ability to explain the purpose of ground fault circuit interrupters and tell where they must be installed.

#### **Measure Description:**

Written Exam and Rubric - Electricity assessment

### ***Findings***

#### *for Measure 2 (SLO 3)*

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#### **Summary of Findings:**

78.9% of students successfully completed objective.  
(38 total students: 30 passed, 8 failed)

**Target Achievement:**

Met

**Analysis of Results:**

Understanding code through interpreting the code book was key to success with this assignment. Students who were able to reference and interpret the code book typically picked this up quickly. Faculty believed that some students may have struggled with reading comprehension skills.

## SLO 4

*Demonstrate a knowledge of the terms, tools, equipment, materials, and techniques, used in plumbing systems.*

### *Measure*

#### *Measure 1 (SLO 4)*

**DIRECT - EXAM**

**Course Alignment:**

BLDG 1410

**Acceptable Target:**

At least 73% of Building Technology students demonstrate the ability to identify the various types of drain, waste, and vent (DWV) fittings and describe their applications.

**Measure Description:**

Written Exam and Rubric - Plumbing assessment

### *Findings*

#### *for Measure 1 (SLO 4)*

**Summary of Findings:**

100% of students successfully completed objective.  
(28 total students: 28 passed, 0 failed)

**Target Achievement:**

Exceeded

**Analysis of Results:**

Students excelled with this assignment. Faculty noted, however, that there is a difference between identifying a fitting and then knowing what to do with it. Future assessment efforts will focus on identification but also on proper application.

### *Measure*

#### *Measure 2 (SLO 4)*

**DIRECT - EXAM**

**Course Alignment:**

BLDG 1410

**Acceptable Target:**

At least 75% of Building Technology students will demonstrate the ability to identify types of fittings and valves used with plastic piping.

**Measure Description:**

Written Exam and Rubric - Plumbing assessment

***Findings***

*for Measure 2 (SLO 4)*

**Summary of Findings:**

78.6% of students successfully completed objective.  
(28 total students: 22 passed, 6 failed)

**Target Achievement:**

Met

**Analysis of Results:**

Most students did well with this assignment, specifically with being able to identify. Future assessment efforts will focus on identification but also on proper application. Also, some students struggled with knowing the difference between different types of fittings such as schedule 40 or 80 (CPVC or PVC). It is possible that some students may not be able to easily distinguish between the slight differences in colors associated with the types.

**SLO 5**

*Demonstrate a knowledge of identification, construction and installation of cabinets.*

***Measure***

*Measure 1 (SLO 5)*

**DIRECT - EXAM**

**Course Alignment:**

BLDG 1420

**Acceptable Target:**

At least 80% of Building Technology students will display the ability to identify and describe joints and other construction features of cabinet components.

**Measure Description:**

Written Exam and Rubric - Cabinetmaking assessment

***Findings***

*for Measure 1 (SLO 5)*

**Summary of Findings:**

75.0% of students successfully completed objective.  
(12 total students: 9 passed, 3 failed)

**Target Achievement:**

Not Met

**Analysis of Results:**

Faculty will seek opportunities to provide more practice with constructing joints. Faculty found that once students understood the construction process, this reinforced their ability to identify different types of joints.

***Measure***

*Measure 2 (SLO 5)*

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**DIRECT - EXAM**

**Course Alignment:**

BLDG 1420

**Acceptable Target:**

At least 76% of Building Technology students will demonstrate the ability identify the different types of cabinets.

**Measure Description:**

Written Exam and Rubric - Cabinetmaking assessment

***Findings***

*for Measure 2 (SLO 5)*

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**Summary of Findings:**

75.0% of students successfully completed objective.  
(12 total students: 9 passed, 3 failed)

**Target Achievement:**

Not Met

**Analysis of Results:**

Faculty believe students are able to better recognize different types of cabinets but failed to perform well on the written test. Students seem to be able to identify cabinets outside of the exam. Some revision to the exam may be necessary to provide more detailed descriptions to help students better distinguish.